

Acute to Chronic Pain and Addiction: Managing Patients on the Opioid Treatment Spectrum

PA Academy of Family Physicians
Kalahari Resort
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Disclosures

- Dr. John Boll has no conflict of interest, financial agreement, or working affiliation with any group or organization.

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Objectives

- Discuss CNMP from the Triple Aim Perspective.
- Summarize misconceptions regarding the treatment of chronic, non-malignant pain.
- Define acute and chronic pain in relationship to chronic disease management.
- Discuss strategies to prevent and treat acute/chronic, non-malignant pain.

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Triple Aim

Institute for Healthcare Improvement Framework
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Information Accessed at <http://www.ihf.org/engage/initiatives/TripleAim/Pages/default.aspx> on 10/7/2015.

Triple Aim - Patient Experience

According to research:

- 50% of CNMP patients will change doctors due to perceived:
 - Knowledge
 - Attitude
- 25% change physicians $\geq 3x$.

Hirst, A.T. et al. Patient Satisfaction With Treatment for Chronic Pain Predictors and Relationship to Compliance. Clinical Journal of Pain 2009;21(4):302-310 and Survey of chronic pain sufferers. Published online by the American Pain Society. 2008. Accessed at www.americanpain.org/links/rosterbooks/summary

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Triple Aim – Patient Experience

Satisfaction is not achieved by keeping pain levels low and/or reducing pain, but rather by:

- Full explanation of the patient's condition
- Perceived merits of treatment recommendations
- The better patients thought the pain problem was explained to them, the more they agreed with the treatment recommendations.

Appropriate treatment of chronic, non-malignant pain:

- involves a caring patient-provider relationship,
- communication of realistic treatment goals, and
- patients having trust and confidence in their providers.

Hirst, A.T. et al. Patient Satisfaction With Treatment for Chronic Pain Predictors and Relationship to Compliance. Clinical Journal of Pain 2009;21(4):302-310 and Survey of chronic pain sufferers. Published online by the American Pain Society. 2008. Accessed at www.americanpain.org/links/rosterbooks/summary

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Triple Aim – Improving Population Health

• **Prescribing of opioids has changed - 2013 Medicare Part D claims for Schedule II Opioid Prescriptions = 56,516,854 claims**

- Family Med (27.1%),
- Internal Med (22.6%),
- NP's (7.2%), PA's (5.5%),
- Orthopedists (4.6%)
- NOT "pill mills"

• **Persons 12 year old plus who used pain relievers non-medically in the past month, 55% got the drug from a friend or relative for free.**

Chen, JH et al. Distribution of Opioids by Different Types of Medicare Prescribers. JAMA Intern Med 2016; 176:259-261. CDC Vital Signs Opioid Prescribing Where You Live Makes a Difference July 2014. accessed at <https://doi.org/10.1186/s12916-015-0400-0> on June 9, 2015 and 2010 National Survey on Drug Use and Health (NSDUH) sponsored by the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS).

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Triple Aim – Improving Population Health

If prescribing practices change, will fatalities decrease?

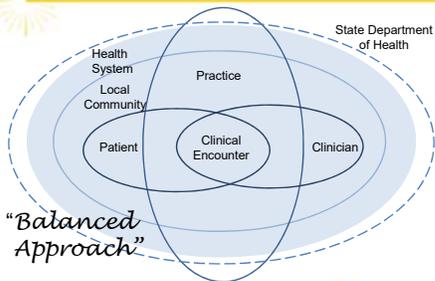
- State of Washington instituted new opioid dosing guidelines in 2007. After implementation,
 - Morphine equivalent dose (MED) per day declined 27%,
 - 35% decline in the proportion of workers on high doses of MED.
- **Number of deaths was reduced by 50% from 2009 to 2010.**

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Franklin GM et al. Bending the prescription opioid dosing and mortality curves: Impact of the Washington State opioid dosing guideline. Am J Ind Med 2012; 55:325-331

Triple Aim – Improving Population Health



Craftree, B.F. et al. Understanding practice from the ground up. The Journal of Family Practice. 2001;50(10):883.

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Triple Aim - Cost

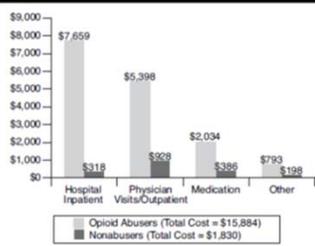
Reducing the Cost of Care –

- Cost of chronic, non-malignant pain in the U.S. is estimated at \$560-635 billion.
- Costs of opioid abuse on our society are significant ~ \$55.7 billion in the U.S. in 2007
- In regards to opioid abuse and misuse with individual patients, the annual all-cause healthcare costs are:
 - \$15,884 to \$18,388 among abusers and
 - \$1,830 to \$2,210 among a matched comparison group of non-abusers.

Birnbaum, H.G. et al. Sooner Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States. *Plan Medicine* 2011;12:667-667 and Strassels, S.A. Economic Burden of Prescription Opioid Misuse and Abuse. *Journal of Managed Care Pharmacy* 2009;15(7):556-562.



FIGURE 2 Direct All-Cause Health Care Costs Per Person (2003 U.S. Dollars) Associated with Opioid Abuse.



Adapted from White et al. Direct costs of opioid abuse in an insured population in the United States. (2007) 39

Strassels, S.A. Economic Burden of Prescription Opioid Misuse and Abuse. *Journal of Managed Care Pharmacy* 2009;15(7):556-562.

Triple Aim - Cost

Every dollar invested in addiction treatment yields a return of...

- \$4 - \$7 in reduced drug-related crime, criminal justice costs, and theft.
- Including savings related to healthcare, total savings can exceed a 12 to 1 ratio
- Major savings to individual and society:
 - fewer interpersonal conflicts,
 - greater workplace productivity,
 - fewer drug-related accidents (overdoses and deaths)

<https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/opioid-addiction-treatment-worth-the-cost> on 8/22/2016



Institute for Healthcare Improvement (IHI) Key Strategies

- **The Opioid Naïve Patient** – Avoid starting, thus preventing opportunities for opioid use and abuse
- **High-Dose Chronic Use** – compassionately taper opioids and move to alternative pain management
- **Opioid Dependent, Seeking Within Health Care** – Address opioid-seeking behavior without moving patients to illegal means of obtaining opioids.
- **Opioid Dependent, Seeking Outside of Health Care** – Address addiction behaviors and outcomes of opioid-seeking individuals.

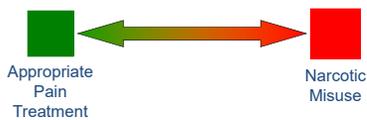
Department of Health and Human Services

Opioid Abuse in the US and HHS Actions to Address Opioid-Related Overdoses and Deaths – (3/26/15)

- Initiative targeted three priority areas to combat opioid abuse:
 1. **Opioid Prescribing Practices** to reduce opioid use disorders and overdose
 2. Expanded use and distribution of **Naloxone**
 3. Expansion of **Medication-assisted Treatment (MAT)** to reduce opioid use disorders and overdose

Chronic Non-Malignant Pain Management

Pain Management Continuum





Chronic Non-Malignant Pain Management

Pain Management Continuum

Appropriate Pain Treatment



- ...relieves symptoms of a physical process.
- ...assist patients in achieving a higher quality of life.
- ...leads to a higher level of provider satisfaction.

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Chronic Non-Malignant Pain Management

Pain Management Continuum

- ...leads to individual drug-related problems.
- ...causes damage to communities.
- ...causes provider dissatisfaction.



Narcotic Misuse

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Why is there a problem?

Misconception #1 -

Medical providers have an ethical responsibility to eradicate chronic, non-malignant pain (with opioids).

Institute of Medicine (2011) report, *Relieving Pain in America*, stated prevalent pain is considered undertreated pain.



Misconception #1

- An ethical argument to treat pain developed over...
 - Centuries - historically, the medical profession had at its core the doctrine of the relief of pain and suffering,
 - 1970's to 1980's - in the hospice and palliative care community,
 - 1980's to 1990's - extended from end of life care to all cancer pain,
 - 1990's - extended for treatment of acute pain,
 - 1990's to 2000's - extended to chronic, non-cancer pain.

Sullivan, M.D. and C.O. Howe. Opioid Therapy for Chronic Pain in US: promises and perils. Pain 2013 Dec; 154(10):1594-100 and Bonica's Management of Pain, 4th ed. 2010: 1544.



Industry Response to Misconception #1

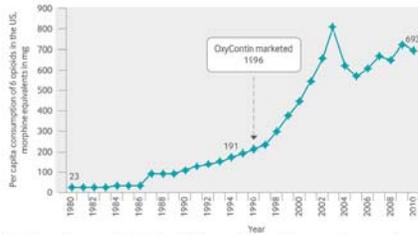


Fig 2 | Per capita consumption of fentanyl, hydromorphone, methadone, morphine, oxycodone, pethidine (meperidine) in the United States. This figure does not include all opioids, and hydrocodone, in particular, is not included. Data from the US Centers for Disease Control indicate that total opioid sales in the US continued to rise consistently at least through 2010²¹

Deyo, R.A. et al. Opioids for low back pain. BMJ 2015;350:g5380



Misconception #1 Revisited

- The belief that chronic, non-malignant pain relief can be achieved with opioids has caused broad iatrogenic harm.
 - **Clinical iatrogenesis** - overdose, abuse and adverse affects in patients
 - **Social iatrogenesis** - escalating opioid diversion, abuse, and overdose in adolescents and poor rural middle-aged adults.
 - **Cultural iatrogenesis** - erosion of our ability to manage pain in non-medical ways, and unrealistic expectations of relief.

Illich, I. Medical Nemesis: 1976 and Sullivan, M.D. and C.O. Howe. Opioid Therapy for Chronic Pain in US: promises and perils. Pain 2013 Dec; 154(10):1594-100



Why is there a problem?

Misconception #2 -

Opioids are effective in improving pain and function for chronic, non-malignant pain.



Misconception #2 Revisited

- Evidence does not support long-term use of opioids for CNMP

- Short-term (<16 weeks) → 30% reduction
- Long-term → No improvement

- No proven relationship between pain relief and improved function.

- Strong opioids may improve pain relief but weak opioids or non-opioids improved function and not pain.

Chou, R. et al. The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop. *Ann Intern Med.* doi: 10.7326/M14-2559 and Sullivan, M.D. and C.O. Howe. Opioid Therapy for Chronic Pain in US: promises and perils. *Pain* 2013 Dec; 154(12):S94-100.



Misconception #2 Revisited

• Danish Study on Functioning with Chronic Pain and Opioids

- Opioid usage was associated with
 - not being physically active in leisure time (OR 1.55),
 - not being engaged in employment (OR 0.37),
 - and being on disability (OR 2.68).
- 90% in the opioid treated pain group reported pain being uncontrolled versus 46% in the non-opioid treated pain group.

Eriksson, J. Critical issues on opioids in chronic non-cancer pain: An epidemiological study. *Pain* 125 (2006) 172-179



Misconception #2 Revisited

“It may be hypothesized that opioids could have relatively short-run (months) benefits, which in the long-run (years) may turn into opposite and deleterious effects as previously described by Schofferman (1993) as “the opioid downhill spiral.””

Eitelson, J. Critical issues on opioids in chronic non-cancer pain: An epidemiological study. Pain 125 (2006) 172-179.





Why is there a problem?

Misconception #3 –

Opioids are a safe alternative for the treatment of chronic, non-malignant pain.





Misconception #3

• **In 1996, American Pain Society/American Academy of Pain Medicine consensus statement supported long-term opioid therapy with the conclusion:**

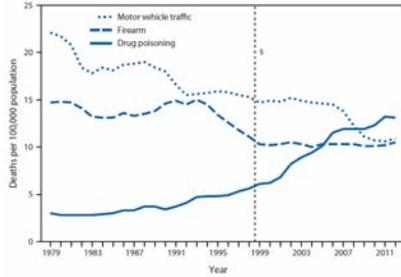
- De novo addiction is low
- Respiratory depression induced by opioids is short-lived
- Tolerance was not a common problem
- Efforts to control diversion should not constrain opioid prescribing.

Von Korff, M. et al. Long-Term Opioid Therapy Reconsidered. Ann Intern Med 2011;155:325-328.



Misconception #3 Revisited

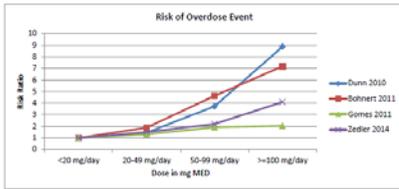
Death Rates for Three Selected Causes of Injury— National Vital Statistics System, United States, 1979–2012



Accessed online at Center for Disease Control, Morbidity and Mortality Weekly, November 21, 2014

MISCONCEPTION #3 REVISITED

Overdose risk approximately doubles at doses between 20 and 49 mg/day MED, and increases nine-fold at doses of 100mg/day MED or more.



Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.aenocmeddirectors.wa.gov on 9/8/2015.

Misconception #3 Revisited

- True incidence of Opioid Use Disorder is unknown, but at least 10 times prediction
- 1 week supply or ≥ 2 Rx after an acute back sprain => Doubles risk for long-term disability
- Use of opioids for >90 days => 60% more likely to still be on chronic opioids in 5 years

Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.aenocmeddirectors.wa.gov on 9/8/2015.



Why is there a problem?

Misconception #4 -

Acute and chronic, non-malignant pain are distinct and unrelated diagnoses.



Misconception #4

- **“Acute Pain”** –
 - “the normal, predicted physiological response to an adverse chemical, thermal or mechanical stimulus...associated with surgery, trauma, and acute illness.”
- **“Chronic Pain”** –
 - “defined as pain lasting longer than 3 months or past the normal time for tissue healing.”

Carr, D. B. and L.C. Goudas. Acute Pain. Lancet 1999; 353:2051-58 and Kyranou, M. and K. Puntillo. The transition from acute to chronic pain: might intensive care unit patients be at risk? Annals of Intensive Care. 2012; 2:36.

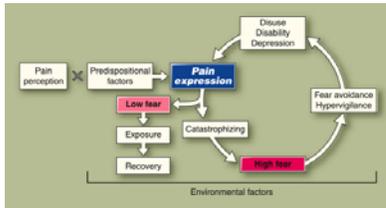
Predictive factors for transition from acute to chronic pain

- **Demographic Factors** - level of education, female sex, older age, poor health status
- **Acute Pain Characteristics** - acute pain intensity, duration, cumulative trauma exposure (Low back pain), severe pain intensity
- **Psychological Factors** - high baseline fear, anxiety, negative beliefs on chronic pain severity, depression
- **Contextual Details** - early use of prescription opioids (acute low back pain), injured at work, disability, litigation

Puig, M.M. Can We P2013;27:284-285 and Clark, M. How best to prevent acute pain becoming chronic? Journal of Pain and Palliative Care Pharmacotherapy. Can we prevent acute pain from becoming chronic? Supplement to the Journal of Family Practice. Sept 2013; vol 62(9): 3-9.



Fear-Avoidance Model of Pain



Turk, D.C. and H.D. Wilson. Fear of Pain as a Prognostic Factor in Chronic Pain: Conceptual Models, Assessment, and Treatment Implications. *Curr Pain Headache Rep* 2010;14(2):88-95.

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Practical Model for Addressing the Relationship Between Acute and Chronic Pain

Chronic Disease Management -

“organized, proactive, multi-component, patient-centered approach to health care delivery that involves all members of a defined population who have a specific disease entity.”

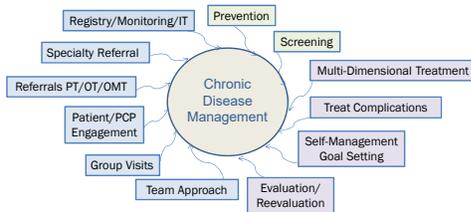
Herry, J.L. The need for knowledge translation in chronic pain. *Pain Res Manage* 2008;13(6):465-476
and S.L. Norris et al. Chronic Disease Management - A Definition and Systematic Approach to Component Interventions. *Disease Management Health Outcomes* 2003;11(8):477-488.

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Components of Chronic Disease Management



Is it time to reconsider the relationship of acute and chronic pain?

- In 2002, ADA introduced *Pre-Diabetes*...
- Should we introduce *Pre-Chronic Pain*?

Pre-Diabetes includes...

- Insulin Resistance
- Glucose Intolerance

Pre-Chronic Pain includes...

- Acute Pain
- Post Procedural Pain
- Neuropathic Pain
- Inflammatory Pain

Found at www.diabetes.org. Accessed on 1/20/15.

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Chronic Disease Management

- Diabetes Example:** Case – 55 year old with newly diagnosed DM Type 2 with blood sugars in the 200's...

Treatment consists of the following:

Insulin – Short-acting Long-acting

Meglitinides
Glitazones
 α – Glucosidase Inhibitors, etc.

Metformin
Sulfonylurea

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Chronic Pain Management

World Health Organization analgesic ladder

Increasing pain

Acetaminophen
Acetylsalicylic acid (ASA)
Nonsteroidal anti-inflammatory drugs (NSAIDs)

Codeine
Oxycodone

Fentanyl
Hydromorphone
Methadone
Morphine
Oxycodone

Example of a uni-dimensional chronic, non-malignant pain approach.

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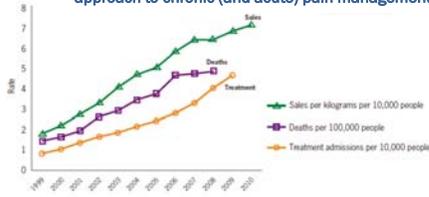
CMAJ 2003;169:38-43

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Chronic Pain Management

What happens when providers use a traditional step-wise approach to chronic (and acute) pain management?

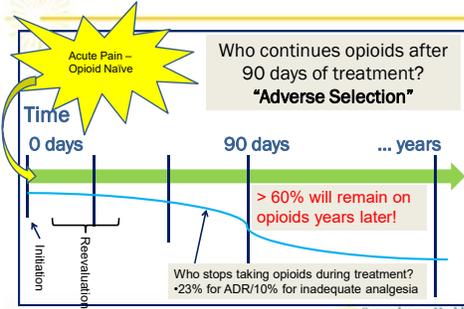


SOURCES: National Vital Statistics System, 1999-2008; Automation of Reports and Consolidated Orders System (ARCOS) of the Drug Enforcement Administration (DEA), 1999-2010; Treatment Episode Data Set, 1999-2009

Prescription Painkiller Overdoses in the US. CDC Vital Signs November 2011.



Chronic Pain Treatment Over Time



Balarzynie, J.C. What is the evidence for the effectiveness of opioid analgesics for chronic pain from clinical and administrative data. UW, May 2012. Bradley C.M. J. Clin Intern Med 28(12):1435-1437, and Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.aacri.com/clinical/ibp/ibp.pdf on 8/8/2015.





Adverse Selection

- “Describes the process where the likelihood of a patient receiving an opioid regimen increases as the associated risks increase.”
- Likelihood of Long-Term Opioids increases with...
 - History of depression or other common mental health disorders by 3-4 fold.
 - History of alcoholism or non-opioid drug abuse by 4-5 times.
 - History of opioid abuse or dependence by 5-10 times.

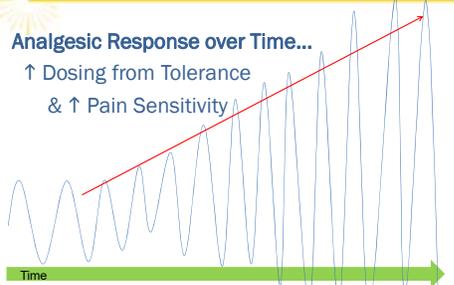
Devo, R.A. et al. Opioids for low back pain. BMJ 2015;350:g6380 and Sullivan, M.D. and C.Q. Howe. Opioid Therapy for Chronic Pain in US: promises and perils. Pain 2013 Dec.; 154(11):S94-100.



Opiate Induced Hyperalgesia

Analgesic Response over Time...

↑ Dosing from Tolerance
& ↑ Pain Sensitivity



Slide courtesy of Dr. Andy Mendenhall and ACPA Resource Guide to Chronic Pain Medication and Treatment. American Chronic Pain Association, 2015 Edition, and Lee, M. et al. A Comprehensive Review of Opioid-Induced Hyperalgesia. Pain Physician 2011; 14:145-161.

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Opiate Induced Hyperkatifeia

Definition:

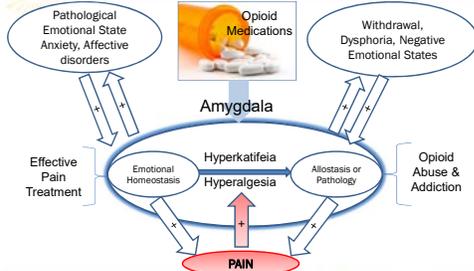
- Increased intensity of the constellation of negative emotional/motivational symptoms and signs observed during withdrawal from drugs of abuse.
- Opiate misuse in the context of pain management produces a hypersensitivity to emotional distress.
- If the Opioid produces a...
 - Break from homeostasis → Hyperkatifeia → Addiction?
 - Restoration of homeostasis → Effective Pain Management

Slide courtesy of Dr. Andy Mendenhall and Shurman, J. et al. Opioids, Pain, the Brain, and Hyperkatifeia: A Framework for the Rational Use of Opioids for Pain. Pain Medicine 2010; 11: 1092-1098.

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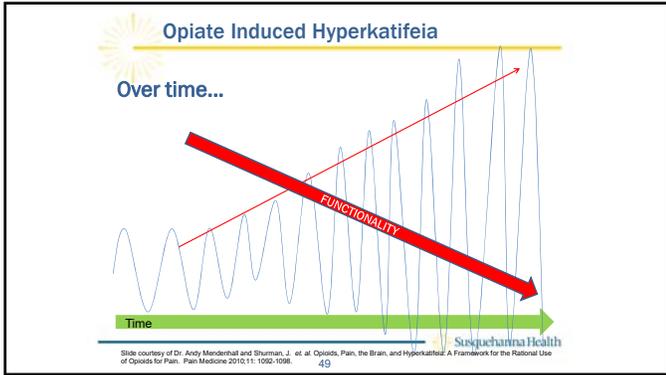
Schematic for Opioid Induced Hyperkatifeia



Slide courtesy of Dr. Andy Mendenhall and Shurman, J. et al. Opioids, Pain, the Brain, and Hyperkatifeia: A Framework for the Rational Use of Opioids for Pain. Pain Medicine 2010; 11: 1092-1098.

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Aberrant Drug Taking Behavior

Definition - "Describes dysfunctional activities suggesting misuse"

Continuum of behaviors from mild to severe.
 The most predictive are:

- Selling Rx drugs, forgery, stealing drugs
- Injecting oral drugs, use of illicit drugs,
- Rx losses, multiple unsanctioned escalations
- Requesting specific drugs, use of drugs for other symptoms
- Hoarding of medication and frequent calls to the prescribing provider's office

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The CNMP/Addiction Conundrum

- **Meta analysis reveals wide variance in reported addiction rates in pain patients.**
 - 2.7-50% depending on criteria for aberrancy
- **Patients with addictive disease frequently report severe chronic pain**
 - 37% in methadone maintenance
 - 24% receiving inpatient treatment
- Users of regularly prescribed opioids had higher rates of opioid addiction 6-12%, Up to 40% misuse or abuse regularly

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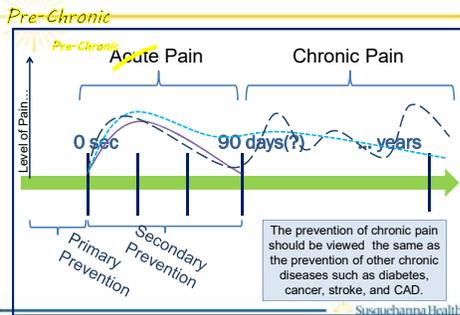
Slide courtesy of Dr. Andy Mendenhall, Martelli, B et al. Ann Intern Med 2007;146(2):116-27 and Rosenbloom, A et al. JAMA 2003;289(18):2370-4, M Edlund et al. Pain Medicine 2007; 8(8):947-56, Rabak et al. Pain Physician 2006; 6(2), and Compton, W. et al. NEJM 2016;374:154-63.

Spectrum of Patient Behaviors with Long-term Opioid Therapy

| Adherent Patient | Chemical Coper? Rational Abuser? Uncontrolled Pain Patient? | Patient with Addiction |
|------------------------------|---|---|
| No or few aberrant behaviors | Moderate aberrant behaviors | Egregious behavior or multiple aberrant behaviors |
| Appropriate use | Inappropriate use | Inappropriate use |
| Quality of Life ↑ | Quality of Life ↑ or ↓ | Quality of Life ↓ |
| Function ↑ | Function ↑ or ↓ | Function ↓ |

Webster, L. and B. Dove. Avoiding Opioid Abuse While Managing Pain. Sunrise Silver Press, 2007.

Acute/Chronic Pain Treatment Over Time



Primary Prevention of Chronic Pain

| Primary Prevention | Examples |
|-------------------------------------|--|
| Injury prevention | Seatbelt use, airbags, helmets |
| Vaccinations | Zoster |
| Avoid tobacco, drug & alcohol abuse | Educate, Referral for Treatment |
| Healthy Lifestyle | Exercise, stress reduction, weight control |
| Mental health care & treatment | |
| Pre-emptive analgesia for surgeries | Gabapentin |

Secondary Prevention of Chronic Pain

| Secondary Prevention |
|--|
| Keep the patient active and address anxiety about activity |
| Identify patient goals and address barriers to success |
| Treat Mental Health disorders |
| Treat Substance Use disorder |
| Surgical Techniques |
| Laparoscopic; nerve-sparing |
| Anesthetic (multi-modal; epidural) |
| Avoid opioids except: |
| Post-surgery, severe pain (≥ 7), or when other alternative tx ineffective |

Cooper, T. et al. Guideline for Prescribing Opioids to Treat Pain in Injured Workers. Washington State Department of Labor and Industries. 2013 and McGreevy, K. et al. Preventing Chronic Pain following Acute Pain: Risk Factors, Preventive Strategies, and their Efficacy. Eur J Pain Suppl. 2011;15(2):365-372



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Treatment of Early Pre-Chronic Pain

- **0 to 6 weeks after injury or surgery**
 - **Establish treatment goals including realistic goals of pain and function.**
 - **Emphasis on self care** – encourage physical activity and continue rewarding activities
 - **Empathetic supportive doctor-patient relationship** to encourage self care
 - **Guide care towards participation in activities** rather than monitoring progress by changes in reported pain alone.
 - **Differentiate goals of short term relief from those of long-term effectiveness.** For long term use, opioids have unproven benefits and substantial risks.

Devo, R.A. et al. Opioids for Low Back Pain. BMJ. 2015;350:g6380 and CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. Accessed online at www.cdc.gov on 3/15/2016



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Treatment of Early Pre-Chronic Pain with Opioids

- **0 to 6 weeks after injury or surgery**
 - **Opioid use should be reserved** for post surgery, for the most severe pain (i.e. pain scores ≥ 7), or when alternative treatments such as NSAIDs and non-pharmacologic therapies are ineffective.
 - **Use opioids for dental pain only after complex dental procedures and at the lowest dose and duration.**
 - **Evidence does not support the use of opioids as initial treatment for back strain or other strains.** If they are prescribed, use should be limited to short-term. CDC Guideline recommends 3 days or less.
 - **Check the state's prescription management program before prescribing and periodically ranging from each prescription to q 3 months.**
 - **Pain and function should improve during the acute phase.** If use of opioids in the acute phase does not lead to improvements in pain and function of at least 30% continued opioids are not warranted.
 - **Taper the opioid off by 6 weeks.**

Cooper, T. et al. Guideline for Prescribing Opioids to Treat Pain in Injured Workers. Washington State Department of Labor and Industries. 2013 and Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.agenymeddirectors.wa.gov on 9/8/2015 and CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. Accessed online at www.cdc.gov on 3/15/2016



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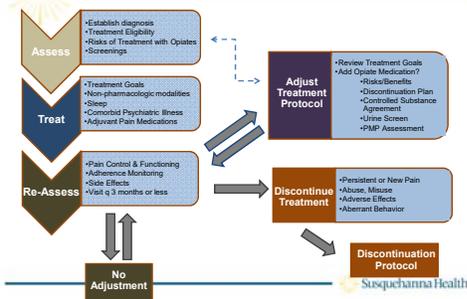
Treatment of Late Pre-Chronic (Subacute) Pain with Opioids

- **Between 6 and 12 weeks after injury or surgery**
 - Document **clinically meaningful improvement** in function and pain with acute use (ex. PEG-3)
 - **Screen patient** for depression with PHQ-9 and/or for PTSD with a validated screen (ex. 4-item PC-PTSD).
 - **Screen for opioid risk** with a one question screen.
 - **Administer a urine drug screen**
 - **Check the state's prescription drug management program**
 - **Re-examine and consider discontinuation or taper of concurrent sedative-hypnotics and/or benzodiazepines.**
 - **Discontinue opioids if no clinically meaningful improvement** in function, adverse outcomes, current substance abuse disorder, or history of opioid use disorder.

Cooper, T. et al. Guideline for Prescribing Opioids to Treat Pain in Injured Workers. Washington State Department of Labor and Industries. 2013 and CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. Accessed online at www.cdc.gov on 3/15/2016

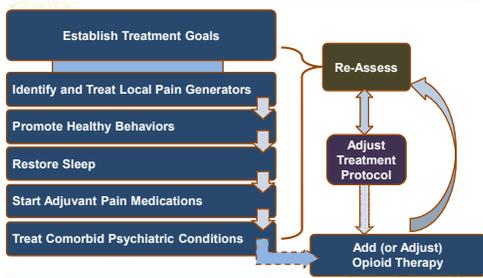


Chronic, Non-Malignant Pain Management Protocol





Chronic Pain Treatment Overview



Adapted from Beland, D. Rational Use of Opioids for Management of Chronic Nonterminal Pain. AFP 2012; 86(3):252-258.

Opioids for Chronic Pain

Use opioids only if there is sustained clinically meaningful improvement in function and no ADR's or contraindications.

Before prescribing opioids...

- review risks and benefits including overdose and addiction, consider how opioids will be discontinued if benefits do not outweigh risks.
- obtain a urine drug screen, review the state prescription drug monitoring program, and sign controlled substance agreement.
- Use lowest effective dose. If titrated upward and no improvement, consider d/c or decreasing dose.
- When starting opioids use immediate release instead of extended or long-acting opioids.
- Carefully assess evidence before titrating to 50 mg/day MED or greater.
- Avoid increasing dosage to 90 mg/day MED or greater and carefully justify doses to 90 mg/day MED or greater.

Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.agencymeddirectors.wa.gov on 9/8/2015 and CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. Accessed online at www.cdc.gov on 3/15/2016



Opioids for Chronic Pain Cont...

- Perform harm reduction/risk mitigation with adherence monitoring (education, UDS, pill counts)
- Consider prescribing take-home naloxone if the patient is on higher opioid dosage (≥ 50 MED) and has one or more of the following:
 - Mental health disorder per DSM 5
 - Family or personal history of substance use disorder or overdose
 - Medical condition that could increase sensitivity to opioid-related side effects.
 - Current use of benzodiazepines
- Tobacco use

Interagency Guideline on Prescribing Opioids for Pain June 2015 accessed online at www.agencymeddirectors.wa.gov on 9/8/2015 and CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016. Accessed online at www.cdc.gov on 3/15/2016



Summary

- Patient satisfaction is not related to reduced pain scores but rather to a caring provider/patient relationship and excellent communication.
- Always consider how to prevent chronic, non-malignant pain when seeing someone with a pre-chronic (acute) pain episode.
- Consider chronic pain as similar to other chronic diseases which require a complex, multidimensional treatment strategy such as chronic disease management.
- If opioids are used for pre-chronic or chronic pain monitor the patient for clinically meaningful improvement and discontinue the opioid if this does not occur.





Questions

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**Acute to Chronic Pain and Addiction:
Managing Patients on the Opioid
Treatment Spectrum**

PA Academy of Family Physicians
Kalahari Resort
November 19, 2016



Disclosure

- Dr. Bradley Miller is a stock holder of Indivior Pharmaceuticals. No conflict of interest exists.
- Dr. Cheryl Stayton is a previous stock holder of Indivior Pharmaceuticals. No conflict of interest exists.



Objectives

- Define addiction as a chronic illness
- Discuss the neurobiology of addiction using opiates as a model
- Review the evidence for using medication assisted treatment options for opiate addiction
- Identify areas to improve approaches to patients with addiction to opiates
- Discuss the PA Prescription Drug Monitoring Program (PDMP)
- Case Reviews and Discussion with Panel

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Addiction is a chronic disease

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What Is Addiction: ASAM Definition¹



ASAM

American Society of Addiction Medicine

Public Policy Statement: Definition of Addiction

Short Definition of Addiction

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

1. American Society of Addiction Medicine. http://www.asam.org/docs/policy-policy-statements/1/definition_of_addiction_long_4-11.pdf?hlvsn=2 accessed April 13, 2012

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What is addiction?

- **Behavioral characteristics:**

- Cannot stop despite repeated attempts
- Disrupts daily activities – time is spent finding, taking, and recovering from substance
 - Can result in unethical/Illegal activities
- Deception, even with (especially with?) loved ones and treatment providers

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What is addiction?

- **Physical characteristics:**

- Withdrawal symptoms, often after only 6-8 hours of no use
 - Not fatal, but awful enough to do almost anything to avoid
- Tolerance: The need for more and more of the substance to get the same effect

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What is addiction?

- **Chronic**

- long-lasting chemical changes in the brain regardless of detoxification

- **Relapsing**

- with and without treatment, craving and drug-seeking can return

- **Progressive**

- gets worse over time; high fatality rates

- **Symptom: Compulsive behavior**

- desperate behaviors to obtain and use

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What is addiction?

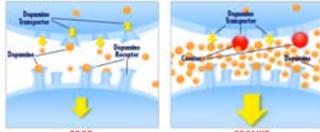
DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER

Brain reward (dopamine) pathways



These brain circuits are important for natural rewards such as food, music, and sex.

Drugs of abuse increase dopamine



Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.

*National Institute of Drug Abuse:

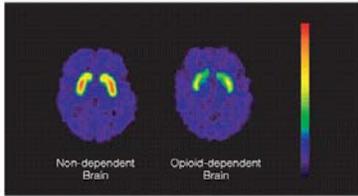
<https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction/drugs-brain>

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Opioid Dependence Causes Changes in Brain

Non-Opioid-Dependent and Opioid-Dependent Brain Images



PET scan images

The lack of red in the opioid-dependent brain shows that chronic opioid use has reduced dopamine receptor concentration

PET/Positron Emission Tomography
Wang GJ et al. *Neuropharmacology*. 1997;16(2):174-182.

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Changes in the Brain

- **Changes in brain structure and function**^{1,2}
 - Survival center
 - Frontal lobe/Executive function
 - Emotion regulation
 - Hedonic tone (sense of well-being)
- **Symptoms triggered years after stopping drug use**²
- **Craving and relapse can result from re-exposure to the drug or environmental cues associated with the drug**³

1. Leshner AI. Addiction is a brain disease, and it matters. *Science*. 1997;270:45-47.
2. Carriz J, Ferris M. Mechanisms of disease: drug addiction. *N Engl J Med*. 2003;349:975-986.
3. Hommer DW. Functional imaging of craving. *Alcohol Res Health*. 1999;23(3):187-196.

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A quick aside...

- Use of Stigmatizing Language
 - **Addict** - how about "opioid use disorder"?
 - **Drug-seeker** - how about "may have a substance use disorder" or "may be experiencing cravings" or "needs to be evaluated for pain"?
 - **Clean/Dirty** - how about "negative/positive"; or "in remission" and "in active use"?

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Treatment

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Treatment

- **Historically, a great divide between*:**
 - Abstinence-oriented treatment
 - AA, NA - Twelve-step-based
 - Use of no psychoactive substances, often including prescribed medications
 - Disease-oriented treatment
 - Medication-assisted treatment; reduce harmful symptoms physiologically
 - Recommended in conjunction with psychosocial treatment

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Detoxification is not treatment

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Detoxification is not Treatment

- Detoxification does NOT “reset” the brain’s baseline
- Relapse after detoxification alone *is the norm* – upwards of 95%
- Can *increase* risk of overdose and death
- If someone is detoxified:
 - Withdrawal should be medically assisted
 - Medication treatment should be started immediately

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Management of a Chronic Illness

Chronic Illness

(Short-term)

- Acute Stabilization
- Hospitalization

(Long-term)

- Medication Treatments
- Psychosocial Treatments/ Behavior Change

Addiction

(Short-term)

- Detoxification
- Rehabilitation

(Long-term)

- Medication Treatments
- Psychosocial Treatments/ Behavior Change

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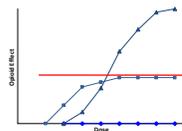
Medication Treatments

- Full agonist (Methadone)
- Partial agonist (Buprenorphine)
- Antagonist (Naltrexone - Vivitrol)

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Medication Treatments



Full Agonist: (high intrinsic activity) (Oxycodone, Heroin, Methadone)

Potentially Lethal Dose

Partial Agonist: (low intrinsic activity) (Buprenorphine)

Antagonist: (no intrinsic activity) (Naloxone/Naltrexone)

Nutt & Langford, 2008, Br J Pharm

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Medication Treatments

- Treatment outcomes research currently supports agonist treatment
 - Buprenorphine products
 - Methadone

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Medication Treatments

- **What about Vivitrol? (Extended release naltrexone)**
 - Once a month injection blocks opioid receptors
- **Why not Vivitrol as first choice?**
 - Previous failure of oral naltrexone treatment
 - No compliance with treatment
 - Reportedly did not relieve cravings or long-term sx – different for injection??
 - Overdose risk
 - Longer-term outcomes for Vivitrol not yet available

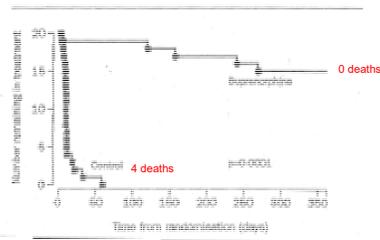
85



Evidence



Kakko, Svanborg, Kreek & Heilig, 2003



Kakko et al. 2003. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden. *Lancet*

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Prescription Opioid Addiction Treatment Study

POATS

Largest study ever conducted to treat Rx opioid dependence (N=653)

- “Higher-functioning” participants with opioid use disorder resulting from opioid prescription medications
- Differences in treatment recommendations?

*Weiss, R.D. et al. 2011. Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence. *Archives of General Psychiatry*

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Prescription Opioid Addiction Treatment Study

- Short-term Buprenorphine + Counseling – 2 conditions each

Results

- Tapering from buprenorphine, whether after 1 month or 3 months, *led to nearly universal relapse within 3 months post-treatment*
- Counseling intensity *made no difference*

*Weiss, R.D. et al. 2011. Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence. *Archives of General Psychiatry*

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POATS 42 month follow-up

| N=306 47% of orig study 80% of follow-up | Opioid-free | Not Opioid-free | % Opioid-free BNX vs no BNX |
|--|---|-----------------------|--------------------------------|
| Taking buprenorphine | 29.4%/79.6% (n=90) | 7.5%/20.4% (n=23) | 79.6% (n=113) |
| Not taking buprenorphine | 31.7%/50.3% (n=97) | 31.4%/49.7% (n=96) | 50.3% (n=193) |
| | In remission: 61.1%; ~50% in agonist treatment | | |

Weiss et al. 2015. Long-term outcomes from the NDACTN POATS. *Drug Alcohol Depend*

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POATS 42 month follow-up

| | Past month | Baseline | Month 18 | Month 30 | Month 42 |
|--|------------|----------|----------|----------|----------|
| Current OD dx % | 100 | 16.3 | 11.5 | 7.8 | |
| Abstinent % | 0 | 51.2 | 63.5 | 61.4 | |
| Agonist Treatment % | 0 | 31.8 | 38.1 | 36.9 | |
| Days of illicit use: Prescription opioids | 27.9 | 10.2 | 7.0 | 6.8 | |
| Chronic Pain % | 42.6 | 34.1 | 28.2 | 26.1 | |

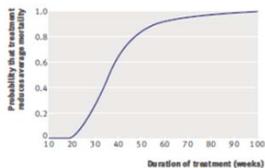
Weiss et al. 2015. Long-term outcomes from the NDACTN POATS. Drug Alcohol Depend





Cornish R. et al, 2010.

Patients (n=5577) receiving medication-assisted therapy with either methadone or buprenorphine in the United Kingdom



All cause mortality:

- No med tx: 10x that of general public
- No reduction in first few months of med tx
- Worst mortality stats when med tx ends
- The longer the treatment, the higher the probability that mortality risk goes down

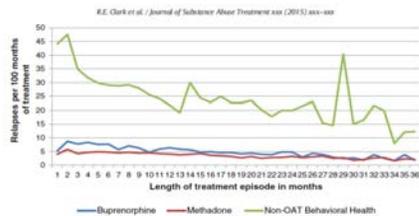
Fig 3 | Probability that opiate substitution treatment (OST) reduces overall mortality for different durations of treatment

Cornish R et al. 2010. Risk of death during and after opiate substitution treatment. British Medical Journal.





What actually works?

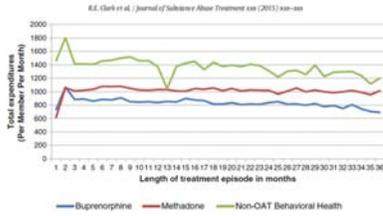


Published in final edited form as: J Subst Abuse Treat. 2015 October ; 57: 75-80. doi:10.1016/j.jat.2015.05.001





What are the costs of caring for patients? (OAT = Opioid Agonist Treatment)



Published in final edited form as: J Subst Abuse Treat 2015 October ; 57: 75-80.
doi:10.1016/j.jsat.2015.05.001



Pharmacology



Brief Pharmacology

- Buprenorphine affinity to mu opioid receptor stronger than that of most other opioids
 - High risk of medication-induced withdrawal if other opioid is on the receptor
 - Induction protocols - COWS
 - Acute pain protocols to override



Brief Pharmacology

- **Two formulations:**

- Buprenorphine alone (Subutex)
- Buprenorphine/Naloxone (Suboxone)
- Under most circumstances, the combination is preferred

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Brief Pharmacology

- **Clarification: Reason for the naloxone**
= Deterrent from taking by injection

- When taken sublingually, naloxone is not absorbed, *essentially inert* – does NOT function as a “blocker”
- If taken by injection
 - Immediate, severe withdrawal OR
 - Diminished effect of buprenorphine

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Brief Pharmacology

- **No evidence of development of tolerance**

- After induction, doses start at recommended max, and then typically reduce over time

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Beliefs that must change



Beliefs that may *Increase overdose and fatalities*

MYTH

“Medication treatment is just replacing one addiction with another”

Really? Are these the same?

| With Substance | With Medication |
|---|--|
| Unable to function well or at all in daily responsibilities | Able to function in daily responsibilities |
| Loss of job, school | Job, School |
| Broken relationships | Relationship repair |
| Crime, deceit | Pre-addiction self |
| Sense of desperation | Sense of normalcy |



Beliefs that may *Increase overdose and fatalities*

MYTH

- People who have developed a substance use disorder are
 - Bad
 - Unworthy of our respect and care



Beliefs that may *Increase* overdose and fatalities

MYTH

Recovering from the disease of addiction without agonist medication is somehow reflective of being "better," "stronger," "more successful" than recovering with medication...that medication is a "crutch"



Beliefs that may *Increase* overdose and fatalities

MYTH

Once someone has achieved abstinence/recovery with the use of treatment medications, then he or she should be able to stop the medication



Why are opioid medications used to treat opioid addictions?

- Long-term (permanent?) changes to opioid receptor system.
- Changed receptors may *require* an opioid to function normally.
- Opioid treatment medications reduce symptoms; promote remission.
- Long-term (at least 2 years, for some, lifelong) medication treatment works best.



Why are opioid medications used to treat opioid addictions?

- Research has consistently and repeatedly found that opioid medication-assisted treatment, compared to no treatment or abstinence:
 - Reduces drug use
 - Reduces overdose and mortality
 - Reduces crime
 - Reduces costs to society
 - Improves functioning and quality of life
- In a high percentage of cases, when medication stops, symptoms return, and overdoses and fatalities can increase, even with ongoing behavioral intervention



Recommendations



Recommendations

- Treat all patients with respect –
 - People experiencing intense craving or withdrawal are *suffering*
 - People positive for buprenorphine are likely in treatment or trying to treat themselves
- Assess for opioid use disorder and withdrawal sx
- Learn effective brief intervention and referral strategies
- Build bridges with medication treatment providers
- Be respectful of all tools in the toolbox



Support all tools in the toolbox

- Office protocols
- Rx Guidelines
- PDMP
- UDS
- CSA
- COWS
- MAT
- Tapering protocols
- Adjuvant treatments
- Screenings
- Naloxone
- Opioid MED calculator
- D&A Tmt partners
- Treatment Medications



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PA Prescription Drug Monitoring Program (PDMP)



Cases



Case 1

- **76 y.o. female with long-standing history of LBP.**
 - Back surgery x 2
 - Neck surgery x1
 - MRI lumbar spine – significant disease
 - Pain never fully controlled and worsens over time
 - Pain now global rather than focal
 - Other causes ruled out
 - Sees pain interventionalist for injections which help somewhat
 - On opioid for >10 years
 - Multiple adjuvant meds/treatments trials/failures
 - Current Rx – Fentanyl patch 75mg/hr, oxycodone/APAP 7.5/325mg 1-2 x/day, gabapentin 300mg TID, NSAIDs, duloxetine 60 mg.

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Case 1

- **What to consider?**
 - No relief or improvement despite treatment
 - What is the MED of current Rx
 - Is this hyperalgesia
 - Is this opiate use disorder
 - Increase or decrease opioid or additional adjuvant
 - Risk factors for age group and long term opiates
 - Compliance with Rx
 - Adequacy of depression treatment
 - PDMP checked, UDS performed
 - CSA in place
 - Should naloxone be prescribed

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Case 1

- **MED 165**
- **Legitimate pain generator**
- **Probable hyperalgesia**
- **Patient buy-in to taper to lowest effective dose**
 - MED < 100 initial goal
- **Plan:**
 - Fentanyl decreased to 50 mcg (pts choice- was offered 12+50 initially)
 - Oxycodone 7.5/APAP 1-2 times per day
 - PDMP accurate, UDS process and CSA in place
 - Symptom diary
 - Phone follow up
 - CBT offered
 - Naloxone considered

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Case 2

- **“Inherited patient”:** 50 y.o. lumberjack, bodybuilder. Back injury many years ago. MRI shows significant degenerative disease. PMHx-anxiety, HTN.

- Rx - Oxycodone/APAP 5/325 mg 1 PO up to TID (22.5 MED), alprazolam 1mg up to BID PRN (refills about Q.O. month), lisinopril, metoprolol
- Regimen never challenged
- Very functional
- CSA in place
- UDS consistent with care
- PDMP appropriate

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Case 2

- **What to consider?**

- Functional with current treatment
- Is there risk for overdose/injury
- Increase or decrease opioid or additional adjuvant
- Compliance with Rx
- Adequacy/appropriateness of anxiety treatment
- PDMP checked, UDS performed
- CSA in place
- Should naloxone be prescribed

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Case 3

58 yo male with remote history of major depression disorder, remote cocaine abuse with incarceration, and ongoing tobacco abuse with chronic pain from lumbar and cervical disc disease from a work related injury in the 1980's. Started clonazepam in the 1990's after the death of a brother. Started opioids in 2000 for his pain and has been titrated upwards to the present day dosage -

- Methadone 10mg 1 tablets 4 times/day (MED 375mg/day)
- Fentanyl Patch 50mcg/hr q 3 days (MED 100mg/day)
- Oxycodone 10mg 1 tablet 4 times/day (MED 60mg/day)

His doctor of 30 years has just retired and you inherit him as a new patient.

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Case 3

• Treatment

- Performed a UDS → + cocaine
- What are the next steps?
- Gave patient options -
 - Seek a new provider
 - Detox/Substance Abuse Treatment
 - Weaning of his controlled medications

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Case 3

• Treatment

- Physical Therapy
- Counseling for depression
- Gabapentin, NSAID (carefully), lidocaine patches
- Started a long taper of his medication
 - Sequential taper of opioids → fentanyl → methadone → oxycodone

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Case 3

• Treatment

- Second UDS → + cocaine
- Patient very belligerent in the office → discharged from the practice after 6 months.

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Case 4

•38 yo male previously healthy has outbreak of herpes zoster on right forehead involving the eye and bridge of nose. Despite aggressive treatment with antivirals, prednisone and oxycodone, pt developed severe post-herpetic neuralgia.

•Multiple adjuvant medications/Interventions trialed

- Gabapentin (confusion), Amitriptyline (fatigue), Nortriptyline (fatigue), topical lidocaine (minimal effect)
- Injection therapy (pain exacerbation)

•Current Regimen

- Hydrocodone/APAP 7.5/325 TID (MED 22.5) - 3 years
- Pregabalin 150mg TID - 1 year

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Case 4

• What to consider?

- Functional with current treatment?
- Is treatment causing hyperalgesia?
- Increase or decrease opioid or additional adjuvant
- Compliance with Rx
- PDMP checked, UDS performed
- CSA in place
- Should naloxone be prescribed?
- Would MAT be appropriate for this patient?

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Thank you